

WHAT IS CLAIMED IS:

1. A semiconductor device package comprising:
an electrical connector formed of an electrically and thermally
conductive material including a web portion and a conductive post extending from an
edge of said web portion, said web portion and said conductive post forming a
unitary body; and
a semiconductor die having a first power contact on a first major
surface thereof and a second power contact on a second major surface thereof
opposite to said first power contact, said first power contact being electrically
connected to said web portion;
wherein said conductive post is located opposite an edge of said die
and extends between said first power contact and said second power contact.
2. A semiconductor device package according to claim 1, further
comprising a control contact formed on said second major surface of said
semiconductor die.
3. A semiconductor device package according to claim 1, wherein
said semiconductor die is a MOSFET.
4. A semiconductor device package according to claim 1, further
comprising a second conductive post.
5. A semiconductor device package according to claim 1, wherein
said first power contact is a drain contact of a MOSFET.

6. A semiconductor device package according to claim 1, wherein said first power contact is electrically connected to said web portion by a layer of solder.

7. A semiconductor device package comprising:
an electrical connector formed of an electrically and thermally conductive material including a web portion, a rim extending around said web portion, and a first post extending from an edge of said rim, said web portion, said rim and said first conductive post forming a unitary body; and
a semiconductor die having a first power contact on a first major surface thereof and a second power contact on a second major surface thereof opposite to said first power contact, said first power contact being electrically connected to said web portion;
wherein said rim is located opposite an edge of said die.

8. A semiconductor device package according to claim 1, further comprising a control contact formed on said second major surface of said semiconductor die.

9. A semiconductor device package according to claim 1, wherein said semiconductor die is a MOSFET.

10. A semiconductor device package according to claim 1, further comprising a second conductive post disposed on an edge of said rim opposite said first conductive post.

11. A semiconductor device package according to claim 1, wherein said first power contact is a drain contact of a MOSFET.

12. A semiconductor device package according to claim 1, wherein said first power contact is electrically connected to said web portion by a layer of solder.

13. A semiconductor device package comprising a semiconductor device die having parallel top and bottom surfaces; said top surface having a first planar metallic electrode, said bottom surface having a solderable planar metal electrode; at least one solderable conductive layer formed on at least a first portion of
5 said first planar metallic electrode, said at least one solderable conductive layer having an upper planar surface; a metal clip having a flat web portion and at least one peripheral rim portion extending from an edge of said flat web portion; said bottom surface of said web being electrically connected in surface to surface contact to said solderable planar metal electrode on the bottom surface of said die; said peripheral
10 rim portion of said clip being extended over and spaced from an edge of said die and terminating in a clip rim surface which is in plane parallel to the plane of said upper planar surface of said at least one solderable conductive layer and being insulated therefrom, wherein said rim portion and said web portion are integral and form a unitary body, said clip is a cup-shaped structure, said peripheral rim is a continuous
15 rim surrounding and spaced from the exterior of said die, wherein said metal clip serves as an electrical connector for electrical connection to said solderable planar metal electrode.

14. The package of claim 13 which further includes a second planar metallic electrode on said top surface of said die, said second metallic

electrode comprising a control electrode; and a second solderable planar metal electrode having an upper surface which is coplanar with said upper surface of said at
5 least one solderable planar metal electrode.

15. The device of claim 13 wherein said at least one solderable planar metal electrode includes a nickel layer connected to said metallic electrode and an easily solderable metal connected atop said nickel layer.

16. The device of claim 13 which further includes a conductive epoxy connecting said bottom surface of said web to said bottom surface of said die.

17. The device of claim 14 which further includes a conductive epoxy connecting said bottom surface of said web to said bottom surface of said die.

18. The device of claim 13 wherein said clip has a second peripheral rim portion on the opposite side of said clip from said at least one peripheral rim portion which extends over and is spaced from an opposite edge of said die and terminating in said plane parallel to the plane in which said at least one
5 peripheral rim portion terminates.

19. The device of claim 14 wherein said clip has a second peripheral rim portion on the opposite side of said clip from said at least one peripheral rim portion which extends over and is spaced from an opposite edge of said die and terminating in said plane parallel to the plane in which said at least one
5 peripheral rim portion terminates.

20. The device of claim 15 wherein said clip has a second peripheral rim portion on the opposite side of said clip from said at least one peripheral rim portion which extends over and is spaced from an opposite edge of said die and terminating in said plane parallel to the plane in which said at least one
5 peripheral rim portion terminates.

21. The device of claim 13 wherein said clip is a cup-shaped structure and wherein said peripheral rim is a continuous rim surrounding and spaced from the exterior of said die.

22. The device of claim 14 wherein said clip is a cup-shaped structure and wherein said peripheral rim is a continuous rim surrounding and spaced from the exterior of said die.

23. The device of claim 15 wherein said clip is a cup-shaped structure and wherein said peripheral rim is a continuous rim surrounding and spaced from the exterior of said die.

24. The device of claim 16 wherein said clip is a cup-shaped structure and wherein said peripheral rim is a continuous rim surrounding and spaced from the exterior of said die.

25. A semiconductor device package comprising a semiconductor device die having parallel top and bottom surfaces; said top surface having a first planar metallic electrode, said bottom surface having a solderable planar metal electrode; at least one solderable conductive layer formed on at least a first portion of
5 said first planar metallic electrode, said at least one solderable conductive layer

having an upper planar surface; a metal clip having a flat web portion and at least one peripheral rim portion extending from an edge of said flat web portion; said bottom surface of said web being electrically connected in surface to surface contact to said solderable planar metal electrode on the bottom surface of said die; said peripheral rim portion of said clip being extended over and spaced from an edge of said die and terminating in a clip rim surface which is in plane parallel to the plane of said upper planar surface of said at least one solderable conductive layer and being insulated therefrom, wherein said rim portion and said web portion are integral and form a unitary body, said clip is a cup-shaped structure, said peripheral rim is a continuous rim surrounding and spaced from the exterior of said die, a conductive epoxy connects said bottom surface of said web to said solderable planar metal electrode, wherein said metal clip serves as an electrical connector for electrical connection to said solderable planar metal electrode.